

ABSTRACT

A magnetoresisive device comprises an MR element, bias field applying layers located adjacent to the side portions of the MR element, and two electrode layers that feed a sense current to the MR element. The electrode layers overlap one of the surfaces of the MR element. The total overlap amount of the two electrode layers is smaller than 0.3 μm . The MR element is a spin-valve GMR element. The MR element incorporates a base layer, a free layer, a spacer layer, a pinned layer, an antiferromagnetic layer, and a cap layer that are stacked in this order. The pinned layer includes a nonmagnetic spacer layer, and two ferromagnetic layers that sandwich this spacer layer.

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